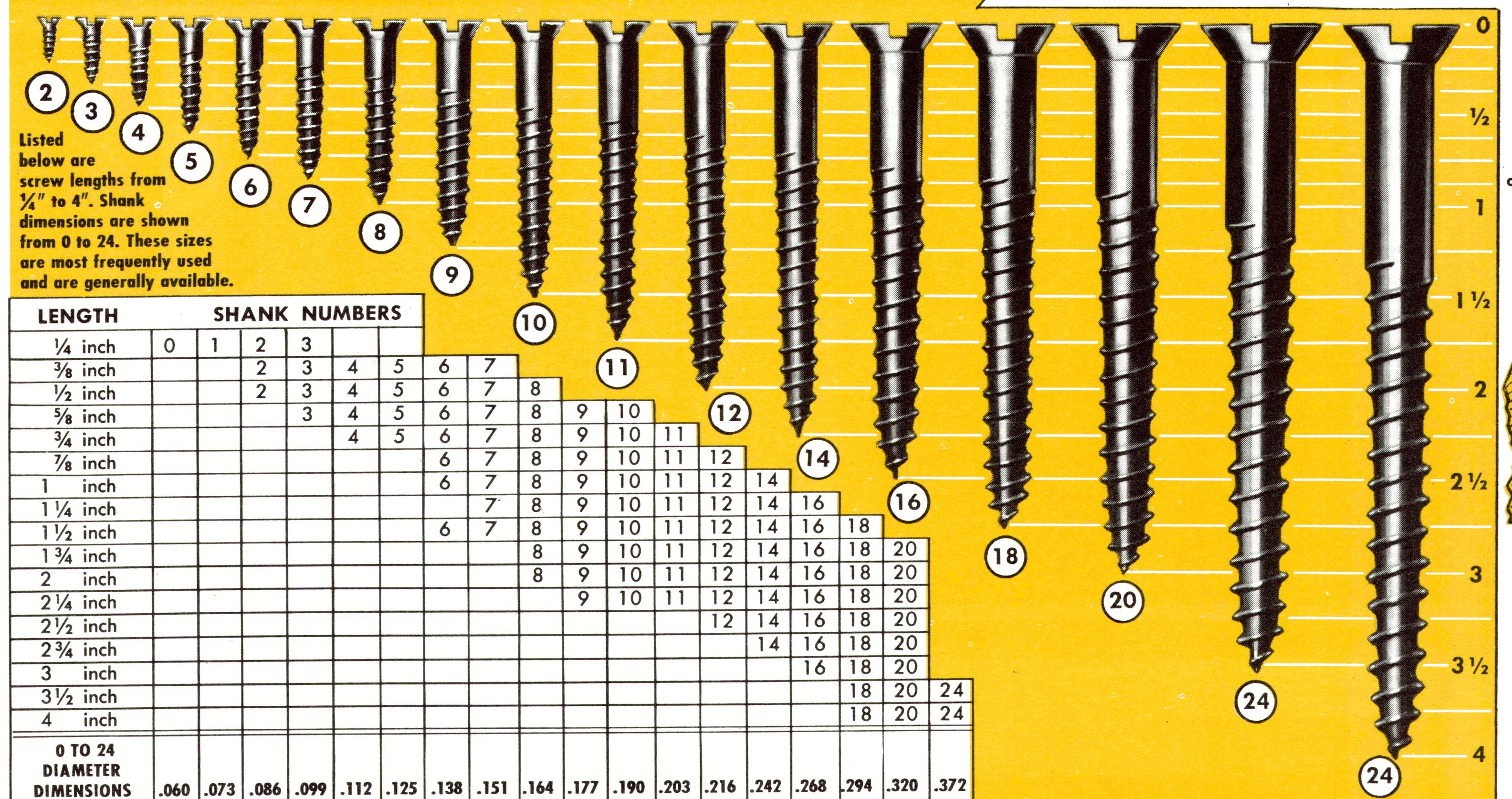
The Greatest Name in Hardware . . . CRAFTSMAN Sold Exclusively by Sears, Roebuck and Co.

HANDY CHART OF COMMON FASTENERS

WOOD SCREWS



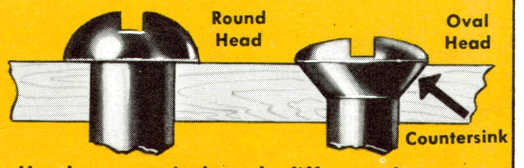
Listed below are screw lengths from ¼" to 4". Shank dimensions are shown from 0 to 24. These sizes are most frequently used and are generally available.

LENGTH	SHANK NUMBERS																	
¼ inch	0	1	2	3														
⅜ inch			2	3	4	5	6	7										
½ inch			2	3	4	5	6	7	8									
⅝ inch				3	4	5	6	7	8	9	10							
¾ inch					4	5	6	7	8	9	10	11						
⅞ inch							6	7	8	9	10	11	12					
1 inch							6	7	8	9	10	11	12	14				
1¼ inch								7	8	9	10	11	12	14	16			
1½ inch							6	7	8	9	10	11	12	14	16	18		
1¾ inch									8	9	10	11	12	14	16	18	20	
2 inch									8	9	10	11	12	14	16	18	20	
2¼ inch										9	10	11	12	14	16	18	20	
2½ inch													12	14	16	18	20	
2¾ inch														14	16	18	20	
3 inch															16	18	20	
3½ inch																18	20	24
4 inch																18	20	24
0 TO 24 DIAMETER DIMENSIONS IN INCHES AT BODY	.060	.073	.086	.099	.112	.125	.138	.151	.164	.177	.190	.203	.216	.242	.268	.294	.320	.372

TWIST BIT SIZES *For Round, Flat and Oval Head Screws in Drilling Shank and Pilot Holes.*

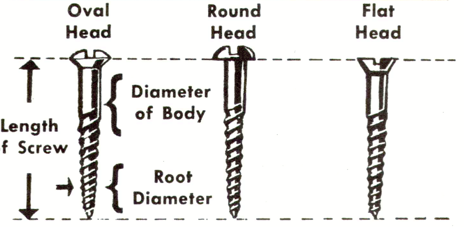
SHANK HOLE HARD & SOFT WOOD	1/16	5/64	3/32	7/64	7/64	1/8	9/64	5/32	11/64	3/16	3/16	13/64	7/32	1/4	17/64	19/64	21/64	3/8
PILOT HOLE SOFT WOOD	1/64	1/32	1/32	3/64	3/64	1/16	1/16	1/16	5/64	5/64	3/32	3/32	7/64	7/64	9/64	9/64	11/64	3/16
PILOT HOLE HARD WOOD	1/32	1/32	3/64	1/16	1/16	5/64	5/64	3/32	3/32	7/64	7/64	1/8	1/8	9/64	5/32	3/16	13/64	7/32
AUGER BIT SIZES FOR COUNTERSUNK HEADS			3	4	4	4	5	5	6	6	6	7	7	8	9	10	11	12

SCREW HEAD STYLES



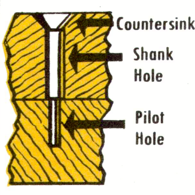
Head structure is the only difference between round, oval, and flat head screws. They are usually available in the many lengths and gauges shown above.

HOW TO MEASURE



Screw length should be at least ⅛" less than combined measurement of material being joined.

PILOT HOLES



Pilot hole screw bits take the guesswork out of joining wood with screws. Use them wherever possible especially when joining hard woods. There is less chance of damage to screws or wood and screws are easier to drive into the proper size pilot holes. In any event, make sure you bore holes large enough to accommodate screw shank in the first piece of wood; bore holes slightly smaller than thread diameter to a depth no more than the length of thread portion in the second piece of wood. Use a "fine-thread" screw in hard woods and a "coarse-thread" screw in soft woods.

Use a brad awl or ice pick to make pilot holes for small screws.

HANDY TIPS FOR DRIVING SCREWS

Screws have two advantages over nails; they give greater holding power and are neater in appearance. Although they are more expensive and harder to install than nails, they are easily removed without damaging the material. They are made of steel, several rust-proof metals and manufactured in many varieties of plated finishes.

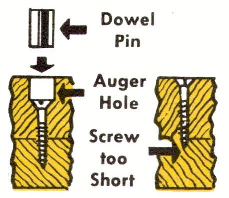
Screwdrivers are available in a large number of types, sizes, and lengths. Most jobs in your work shop can be done with three standard blade sizes. Never use the screwdriver as a lever or chisel.

TRY IT THIS WAY . . .

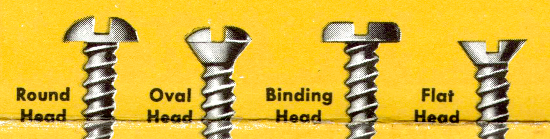
1. Drill Pilot holes—particularly in hard woods.
2. Use a screwdriver with a blade that fits snugly in the full width of the screw head slot.
3. Use as long a screwdriver as possible for greater leverage.
4. Keep screwdriver square and flat in screw slot.
5. Apply steady, even pressure while holding screwdriver in line with the screw. Hold screw with other hand until it is firmly started in the wood. Once the screw is started, most force is used in turning the screwdriver.
6. Seat screw snugly and firmly. Don't strip wood or break the screw by applying too much pressure. If screw becomes too hard to turn before seated, withdraw screw and re-bore hole.

Large screws drive easier if they are soaped or waxed.

Use an auger bit or preferably a screw pilot bit to counterbore for concealing screws with dowel pins or to extend screw deeper into material being joined. The new screw pilot bits do the job easier and better.

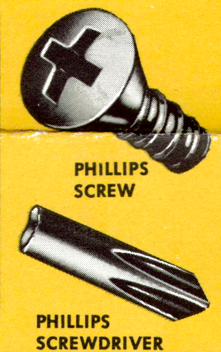


SHEET METAL SCREWS



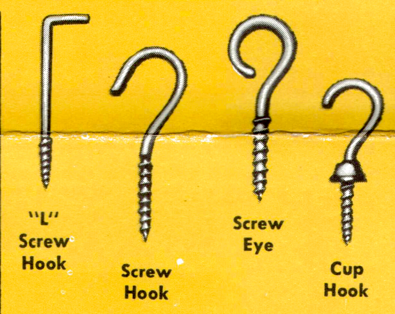
"Type A" and "Type B" are the two types of sheet metal screws manufactured. "Type A" is intended for the joining or fastening of sheet metal 18 gauge or lighter, while "Type B" is for use on sheet metal up to 6 gauge. Flat, round, oval, binding and stove are the head styles in general use and are obtainable in lengths from ⅛" to 2" and in Nos. 4, 6, 7, 8, 10, 12 and 14 shank diameters. Guide holes, either drilled or punched, should be slightly smaller than screw diameter.

PHILLIPS RECESSED HEAD SCREWS



The cross-shaped slot in the head identifies the Phillips recessed-head screw. It is available in nearly as wide a range as the standard screw and requires a special screwdriver. Two sizes of Phillips screwdrivers fit most Phillips screws generally used.

SPECIAL SCREWS

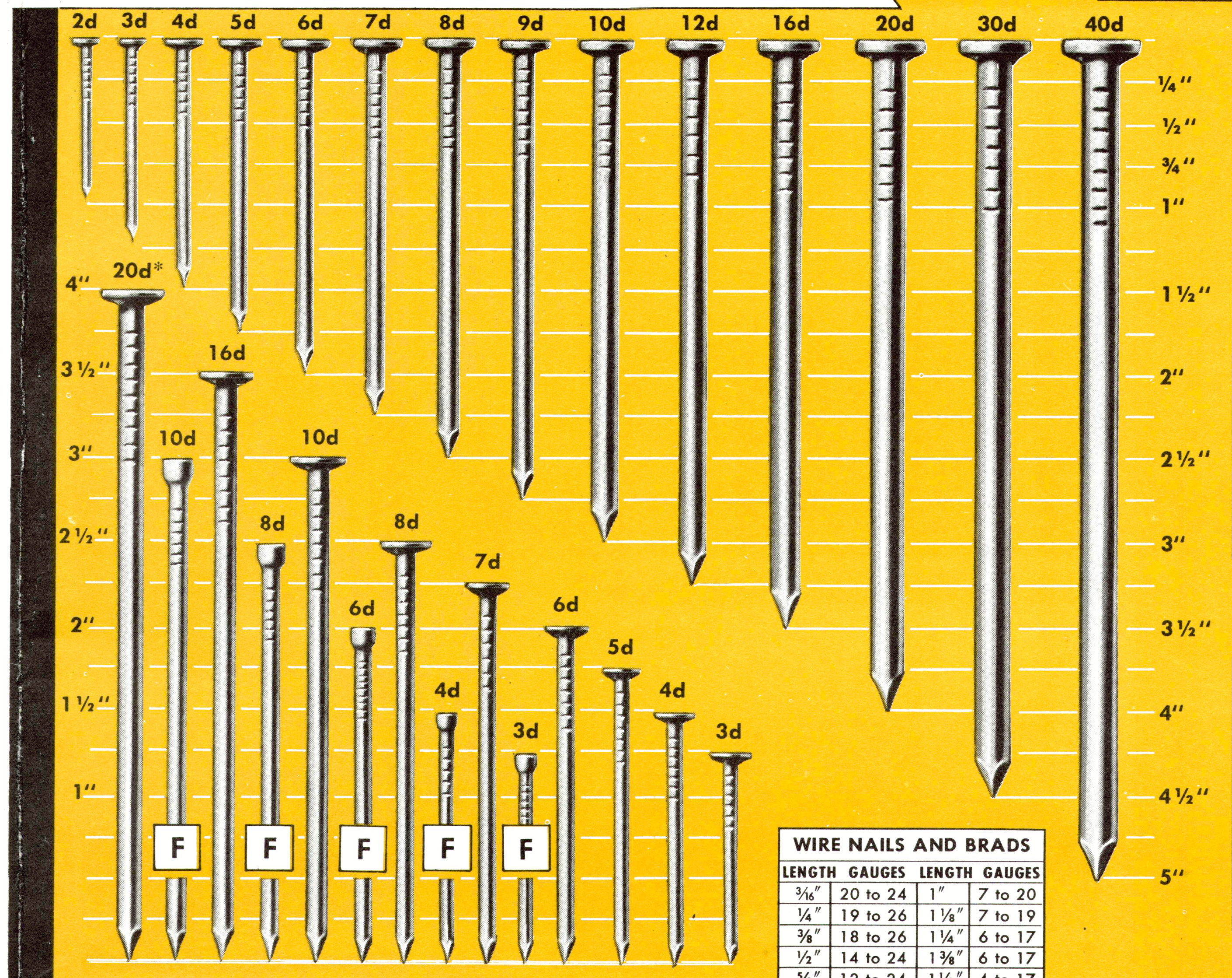


Available in many sizes and metals

TWIST DRILL SIZES FOR ROUND, OVAL, AND FLAT HEAD SCREWS IN DRILLING SHANK AND PILOT HOLES

SCREW SIZES—COMMON, SLOTTED HEAD		0	1	2	3	4	5	6	7	8	9	10	11	12	14	16	18	20	24
SHANK HOLE—HARD & SOFT WOOD	Fractional	1/16	5/64	3/32	7/64	7/64	1/8	9/64	5/32	11/64	3/16	3/16	13/64	7/32	1/4	17/64	19/64	21/64	3/8
	Number-Letter	52	47	42	37	32	30	27	22	18	14	10	4	2	D	I	N	P	V
PILOT HOLE—SOFT WOOD	Fractional	1/64	1/32	1/32	3/64	3/64	1/16	1/16	1/16	5/64	5/64	3/32	3/32	7/64	7/64	9/64	9/64	11/64	3/16
	Number	75	71	65	58	55	53	52	51	48	45	43	40	38	32	29	26	19	15
PILOT HOLE—HARD WOOD	Fractional	1/32	1/32	3/64	1/16	1/16	5/64	5/64	3/32	3/32	7/64	7/64	1/8	1/8	9/64	5/32	3/16	13/64	7/32
	Number	70	66	56	54	52	49	47	44	40	37	33	31	30	25	18	13	4	1

NAILS



BOX NAILS AND F FINISHING NAILS

WIRE NAILS AND BRADS

LENGTH	GAUGES	LENGTH	GAUGES
3/16"	20 to 24	1"	7 to 20
¼"	19 to 26	1⅛"	7 to 19
⅜"	18 to 26	1¼"	6 to 17
½"	14 to 24	1⅜"	6 to 17
⅝"	12 to 24	1½"	4 to 17
¾"	10 to 21	1⅝"	4 to 17
⅞"	8 to 20	1¾"	4 to 17

*The letter "d" is derived from the English symbol for "pence" or "penny". Originally, this meant the number of nails purchased for a penny. It now designates "size" with prefixed number.

COMMON NAILS

FOR STRUCTURAL AND ROUGH CARPENTRY

SIZE	LENGTH	GAUGE	DIAMETER HEAD INCHES	APPROX. NO. TO POUND
2d	1 inch	No. 15	11/64	870
3d	1¼ inch	No. 14	13/64	550
4d	1½ inch	No. 12½	¼	300
5d	1¾ inch	No. 12½	¼	260
6d	2 inch	No. 11½	17/64	175
7d	2¼ inch	No. 11½	17/64	158
8d	2½ inch	No. 10¼	9/32	105
9d	2¾ inch	No. 10¼	9/32	95
10d	3 inch	No. 9	5/16	68
12d	3¼ inch	No. 9	5/16	63
16d	3½ inch	No. 8	11/32	47
20d	4 inch	No. 6	13/32	30
30d	4½ inch	No. 5	7/16	23
40d	5 inch	No. 4	15/32	18
50d	5½ inch	No. 3	½	15
60d	6 inch	No. 2	17/32	11

BOX NAILS

FOR STRUCTURAL AND ROUGH WORK—BETTER THAN COMMON NAILS FOR WORK IN SOFT WOOD—DRIVE EASIER—LESS LIKELY TO SPLIT WOOD

SIZE	LENGTH	GAUGE	DIAMETER HEAD INCHES	APPROX. NO. TO POUND
3d	1¼ inch	No. 14½	7/32	590
4d	1½ inch	No. 14	7/32	455
5d	1¾ inch	No. 14	7/32	390
6d	2 inch	No. 12½	17/64	225
7d	2¼ inch	No. 12½	17/64	200
8d	2½ inch	No. 11½	19/64	135
10d	3 inch	No. 10½	5/16	90
16d	3½ inch	No. 10	11/32	70
20d	4 inch	No. 9	⅜	50

FINISHING NAILS

FOR FINISHED CARPENTRY, TRIM AND CABINET WORK

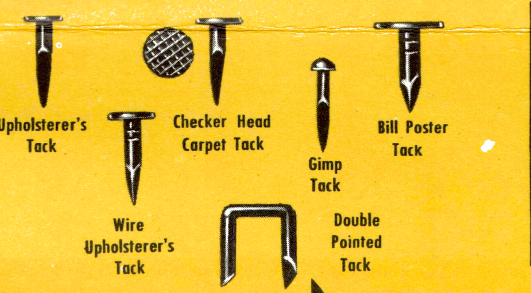
SIZE	LENGTH	GAUGE	DIAMETER HEAD GAUGE	APPROX. NO. TO POUND
3d	1¼ inch	No. 15½	12½	850
4d	1½ inch	No. 15	12	575
6d	2 inch	No. 13	10	300
8d	2½ inch	No. 12½	9½	192
10d	3 inch	No. 11½	8½	122

CASING NAILS

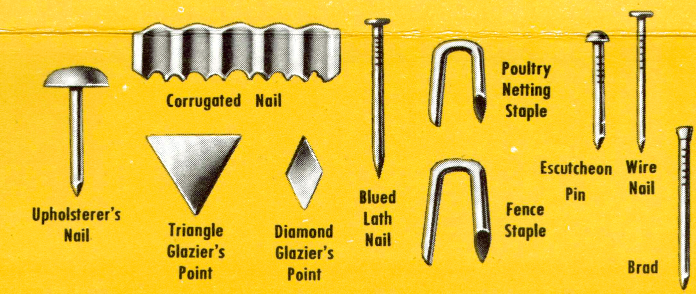
FOR INTERIOR TRIM AND CABINET MAKING

SIZE	LENGTH	GAUGE	DIAMETER HEAD GAUGE	APPROX. NO. TO POUND
4d	1½ inch	No. 14	11	450
6d	2 inch	No. 12½	9½	240
8d	2½ inch	No. 11½	8½	145
10d	3 inch	No. 10½	7½	94
16d	3½ inch	No. 10	7	71

COMMON TACKS



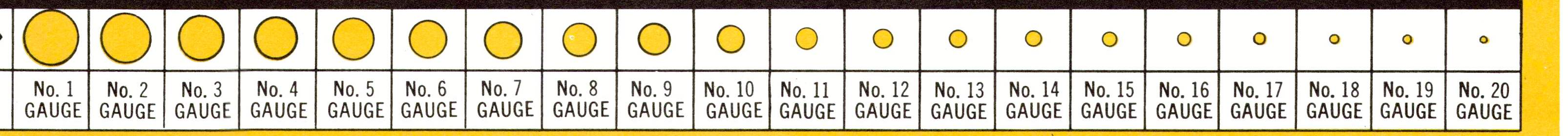
MISCELLANEOUS "SPECIALS"



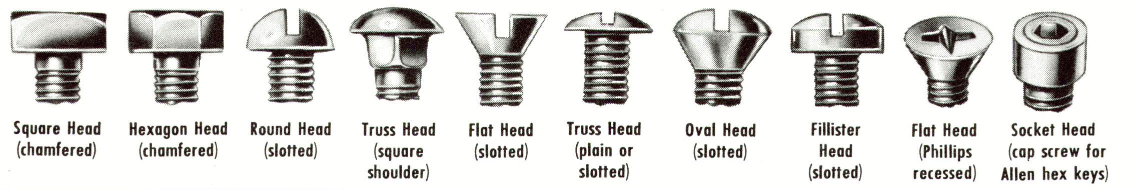
DIAMETER OF NAILS . . . 1 TO 20 GAUGE

DRILLED PILOT HOLES SHOULD BE SLIGHTLY SMALLER THAN NAIL DIAMETER

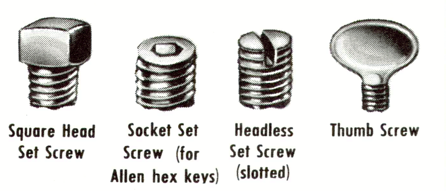
THE ½ AND ¼ AFTER GAUGE NUMBERS IN REFERENCE TABLES MEAN SLIGHTLY SMALLER THAN GAUGE DIAMETERS ILLUSTRATED BELOW



BOLT HEAD DETAILS AND STYLES



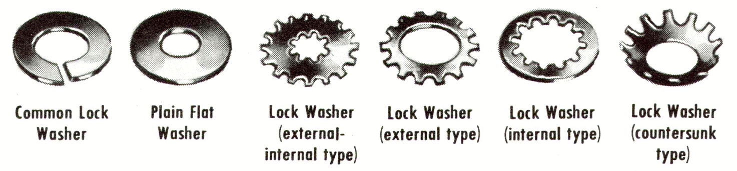
SET SCREWS


Square Head Set Screw
Socket Set Screw (for Allen hex keys)
Headless Set Screw (slotted)
Thumb Screw

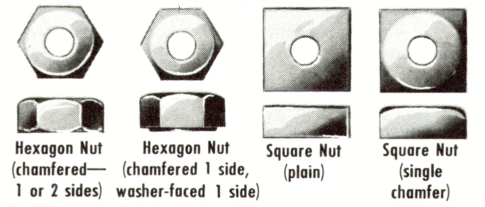
NUTS AND BOLTS

Listed are the many types of bolts found around the average home. Steel is the standard metal for most bolts. However, they are available in brass and in different platings.

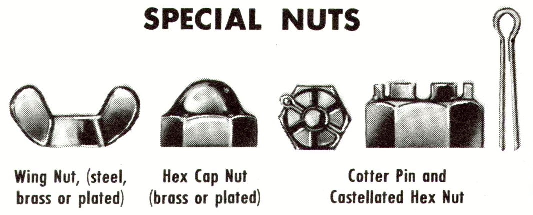
WASHER TYPES AND DETAILS


Common Lock Washer
Plain Flat Washer
Lock Washer (external-internal type)
Lock Washer (external type)
Lock Washer (internal type)
Lock Washer (countersunk type)

NUT STYLES


Hexagon Nut (chamfered—1 or 2 sides)
Hexagon Nut (chamfered 1 side, washer-faced 1 side)
Square Nut (plain)
Square Nut (single chamfer)

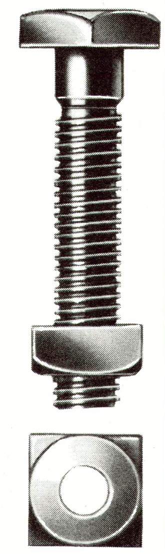
SPECIAL NUTS


Wing Nut, (steel, brass or plated)
Hex Cap Nut (brass or plated)
Cotter Pin and Castellated Hex Nut

MACHINE BOLTS

COARSE THREAD—SQUARE NUT—1 SIDE CHAMFERED

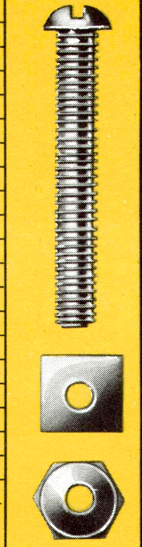
LENGTH IN INCHES	DIAMETER IN INCHES ¼	5/16	⅜	7/16	½	⅝	¾	⅞	1
½	s	s	s						
⅝	s	s	s						
¾	s	s	s						
1	s	s	s	s	s	s	s		
1¼	s	s	s	s	s	s	s		
1½	s	s	s	s	s	s	s	s	s
1¾	s	s	s	s	s	s	s	s	s
2 ↕ 20	2" to 5" Lengths Advance in ¼" Steps 5" to 12" Lengths Advance in ½" Steps 12" to 20" Lengths Advance in 1" Steps These Lengths Made in ALL Diameters								
21									s
22					s	s	s	s	s
23									s
24					s	s	s	s	s
25									s
26							s	s	s
27									s
28							s	s	s
29	s = STEEL								s
30							s	s	s



MACHINE SCREWS

AVAILABLE IN SLOTTED FLAT, FILLISTER OR OVAL HEAD STYLES. COARSE OR FINE THREAD—PLAIN, SQUARE OR HEX NUT—1 OR 2 SIDES CHAMFERED

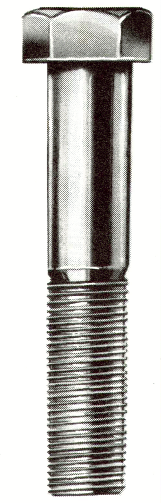
LENGTH IN INCHES	WIRE GAUGE NUMBER 2	3	4	5	6	8	10	12	DIA. IN IN. ¼	5/16	⅜	½
⅛	sb	sb	sb	sb	sb							
3/16	sb	sb	sb	sb	sb	sb	sb					
¼	sb	sb	sb	sb	sb	sb	sb	sb				
5/16	sb	sb	sb	sb	sb	sb	sb	sb	sb			
⅜	sb	sb	sb	sb	sb	sb	sb	sb	sb	sb		
7/16	sb	sb	sb	sb	sb	sb	sb	sb	sb	sb		
½	sb	sb	sb	sb	sb	sb	sb	sb	sb	sb	sb	
9/16	sb	sb	sb	sb	sb	sb	sb	sb	sb	sb	sb	
⅝	sb	sb	sb	sb	sb	sb	sb	sb	sb	sb	sb	
¾	sb	sb	sb	sb	sb	sb	sb	sb	sb	sb	sb	sb
⅞	sb	sb	sb	sb	sb	sb	sb	sb	sb	sb	sb	sb
1			sb	sb	sb	sb	sb	sb	sb	sb	sb	sb
1⅛			sb	sb	sb	sb	sb	sb	sb	sb	sb	sb
1¼			sb	sb	sb	sb	sb	sb	sb	sb	sb	sb
1½			sb	sb	sb	sb	sb	sb	sb	sb	sb	sb
1¾				sb	sb	sb	sb	sb	sb	sb	sb	sb
2				sb	sb	sb	sb	sb	sb	sb	sb	sb
2¼						sb	sb	sb	sb	sb	sb	sb
2½	s = STEEL b = BRASS (coarse thread only)					sb	sb	sb	sb	sb	sb	sb
2¾						sb	sb	sb	sb	sb	sb	sb
3						sb	sb	sb	sb	sb	sb	sb



CAP SCREWS

AVAILABLE IN SLOTTED FLAT AND FILLISTER HEAD STYLES. HEX HEAD THREADED COARSE OR FINE—OTHERS COARSE ONLY—SOME SIZES AVAILABLE IN BRASS, COARSE THREADS

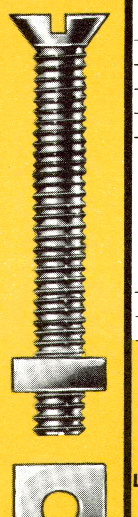
LENGTH IN INCHES	DIAMETER IN INCHES ¼	5/16	⅜	7/16	½	9/16	⅝	¾	⅞	1
½	hpf	hpf	hp							
⅝	hpf	hpf	hpf							
¾	hpf	hpf	hpf	hpf	hpf					
⅞	hp	hp	hp	hp	hp					
1	hpf	hpf	hpf	hpf	hpf	hpf	hf	f		
1¼	hpf	hpf	hpf	hpf	hpf	hpf	hpf	hf		
1½	hpf	hpf	hpf	hpf	hpf	hpf	hpf	hpf		
1¾	hpf	hpf	hpf	hpf	hpf	hpf	hpf	hpf	p	
2	hpf	hpf	hpf	hpf	hpf	hpf	hpf	hpf	hp	hp
2¼	hpf	hpf	hpf	hpf	hpf	hpf	hpf	hpf	hp	hp
2½	hp	hpf	hpf	hpf	hpf	hpf	hpf	hpf	hp	hp
2¾	hp	hpf	hpf	hpf	hpf	hpf	hpf	hpf	hp	hp
3	hp	hp	hpf	hpf	hpf	hpf	hpf	hpf	hp	hp
3¼	h	hp	hp	hp	hp	hp	hp	hp	hp	hp
3½	h	h	hp	hp	hpf	hpf	hpf	hpf	hp	hp
3¾			h	hp	hp	hp	hp	hp	hp	hp
4			h	h	hpf	hpf	hpf	hpf	hp	hp
4½					h	h	hp	hp	hp	hp
5	h = HEX p = FILLISTER f = FLAT						h	h	hp	hp
5½									h	h
6									h	h



STOVE BOLTS

AVAILABLE IN SLOTTED ROUND AND TRUSS HEAD STYLES—COARSE THREAD—PLAIN SQUARE NUT

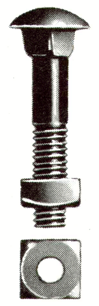
LENGTH IN INCHES	DIAMETER IN INCHES ⅛	5/32	3/16	¼	5/16	⅜	½
⅜	s	s	s				
½	s	s	s	s			
⅝	s	s	s	s			
¾	s	s	s	s	s	s	
⅞	s	s	s	s	s	s	
1	s	s	s	s	s	s	s
1⅛	s	s	s	s	s	s	s
1¼	s	s	s	s	s	s	s
1⅜	s	s	s	s	s	s	s
1½	s	s	s	s	s	s	s
1¾	s	s	s	s	s	s	s
2	s	s	s	s	s	s	s
2¼			s	s	s	s	s
2½			s	s	s	s	s
2¾			s	s	s	s	s
3			s	s	s	s	s
3½			s	s	s	s	s
4			s	s	s	s	s
4½			s	s	s	s	
5			s	s	s	s	
5½	s = STEEL		s	s	s	s	
6			s	s	s	s	



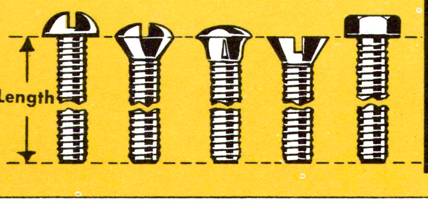
CARRIAGE BOLTS

COARSE THREAD—SQUARE NUT, 1 SIDE CHAMFERED

LENGTH IN INCHES	DIAMETER IN INCHES 3/16	¼	5/16	⅜	7/16	½	9/16	⅝	¾
½	s	s							
¾	s	s	s	s					
1	s	s	s	s	s	s		s	
1¼	s	s	s	s	s	s	s	s	
1½ ↕ 20	1½" to 4½" Lengths advance in ¼" Steps 4½" to 12" Lengths advance in ½" Steps 12" to 20" Lengths advance in 1" Steps These Lengths Made in All Diameters								
22	s = STEEL					s		s	
24						s		s	

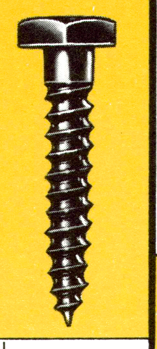


HOW TO MEASURE



LAG BOLTS

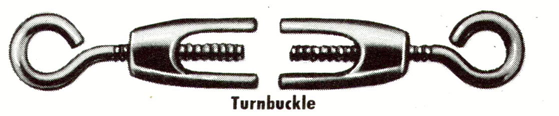
LENGTH IN INCHES	DIAMETER IN INCHES ¼	5/16	⅜	7/16	½	⅝	¾	⅞	1
1	s	s	s	s	s				
1¼	s	s	s	s	s				
1½	s	s	s	s	s	s	s		
1¾	s	s	s	s	s	s	s		
2 ↕ 10	2" to 8" Lengths advance in ½" Steps 8" to 10" Lengths advance in 1" Steps These Lengths Made in All Diameters								
11			s	s	s	s	s	s	s
12			s	s	s	s	s	s	s
13						s	s	s	s
14						s	s	s	s
15	s = STEEL					s	s	s	s
16						s	s	s	s



DECIMAL EQUIVALENTS OF FRACTIONS

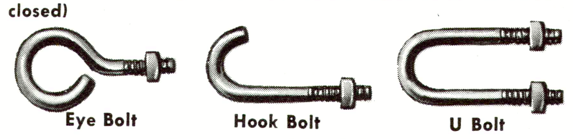
1/64—.0156	9/64—.1406	17/64—.2656	25/64—.3906
1/32—.0312	5/32—.1562	9/32—.2812	13/32—.4062
3/64—.0469	11/64—.1719	19/64—.2969	27/64—.4219
1/16—.0625	3/16—.1875	5/16—.3125	7/16—.4375
5/64—.0781	13/64—.2031	21/64—.3281	29/64—.4531
3/32—.0937	7/32—.2187	11/32—.3437	15/32—.4687
7/64—.1094	15/64—.2344	23/64—.3594	31/64—.4844
1/8—.1250	1/4—.2500	3/8—.3750	1/2—.5000

SPECIAL, COMMON-USE BOLTS



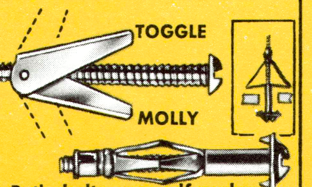
Turnbuckle

Available with eye bolts on ends or hook and eye bolt combination. Sizes range from 4½" to 20" open (3¼" to 13½" closed)



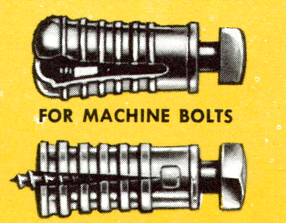
Made in a variety of sizes

SCREW ANCHORS

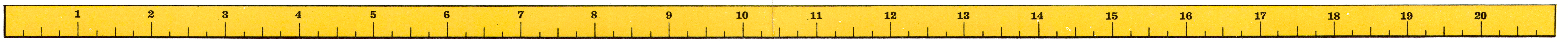


Both bolts are self-anchoring. Molly bolt sleeve is crimped when drawn up. Wings on toggle spring open after insertion in hole.

EXPANSION SHIELDS



For use in fastening to concrete, brick or stone.



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